

ASAP

Dart Aerospace Ltd.

Date: Wednesday, 06/08/2008 2:01 PM
 User: Julie Lecocq

Process Sheet

SPKIT-1

| | | | | |
|-----------------------|--|----------------------|------------------|-------------------|
| Customer | : CU-DAR001 | Helicopters Services | Drawing Name | : STEP WELDMENT |
| Job Number | : 41039 | | | |
| Estimate Number | : 12577 | | | |
| P.O. Number | : | | Part Number | : D3562042 |
| This issue | : 06/08/2008 | IO. No. : | Drawing Number | : D3562 REV E |
| Prsht Rev. | : NC | | Project Number | : N/A |
| First Issue | : 1/1 | pe : LARGE FAB ASSY | Drawing Revision | : E |
| Previous Run | : 40289 | | Material | : |
| Written By | : | | Due Date | : 29/08/2008 |
| Checked & Approved By | : <u>JLD 08-08-06</u> | | Qty: | <u>2</u> Um: Each |
| Comment | : Est Rel New Issue 06-11-09 JLM | | | |
| | Est rev ECN 987 07.10.09 EC verified by: DD | | | |
| | Est Rel ECN1048 07-12-18 DD verified by: EC | | | |
| | Est Rel 08 07-28 add chemical conversion coat DD | | | |
| | verified by: EC | | | |

Additional Product

Job Number:



| | | |
|---------|-----------------------|---------------|
| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|

| | | |
|-----|-----------|----------------|
| 1.0 | D2622120C | Step Extrusion |
|-----|-----------|----------------|



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)
 Qty Part # Description Batch:
 1 D2622-120C Extrusion B40937

Check Material for any Dents or Defects

| | | |
|-----|-------------|------------------------------|
| 2.0 | LARGE FAB 1 | LARGE FABRICATION RESOURCE 1 |
|-----|-------------|------------------------------|



Comment: LARGE FABRICATION RESOURCE 1
 1-Cut D2622 extrusion as per Dwg D3562
 2-Deburr and bevel ends for welding

| | | |
|-----|-----|------------------------------|
| 3.0 | QC5 | INSPECT WORK TO CURRENT STEP |
|-----|-----|------------------------------|



Comment: INSPECT WORK TO CURRENT STEP

| | | |
|-----|-----------------|----------------------------|
| 4.0 | HAND FINISHING1 | HAND FINISHING RESOURCE #1 |
|-----|-----------------|----------------------------|



Comment: HAND FINISHING RESOURCE #1
 Chemical Conversion Coat as per QSI 005 4.1

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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NOTE: Date & initial all entries

Date: Wednesday, 06/08/2008 2:08:47 PM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41039

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Handwritten: 08.09.08 5

6.0

D3560042

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

ARM WELDMENT

Batch: *341281*

Handwritten: 08.09.08 2

7.0

D3560044

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total : 5.0000 Each(s)

ARM WELDMENT

Batch: *335298*

Handwritten: 08.09.08 2

8.0

MS20600AD4W5

Blind Rivet



Comment: Qty.: 32.0000 Each(s)/Unit Total : 160.0000 Each(s) *64x*

Blind Rivet

batch: *m108990* ✓

Handwritten: 08.09.08 2

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Drill Rivet holes as per dwg D3562. Touch up alodine

2- Rivet legs using Magnabond as per dwg D3562.

*****Ensure to wipe off any excess magnabond *****

A/R Magnabond 6398 Batch: *M106695*

Handwritten: 08.09.08 2
Handwritten: 08.09.08 2
Handwritten: 08.09.08 2

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Handwritten: 08.09.09 (2)

11.0

D2734

Step End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D2734

End Cap

Handwritten: B39179 ✓

Handwritten: 08.09.09 (40)

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41039

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld end caps as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.

A/R Aluminum Rod 108037

2-Grind end cap welds flush as per Dwg D3562

SAD 08/09/10 (2x) SP 08.09.09 2K

13.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD 08-09-10/11

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S080710 (2x)

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M-1 08/09/10

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

JD 08.09.11 (2x)

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3562 and QSI 005 4.4

Batch: _____

FL 08/09/11 (2)

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

SP 08/09/11 (2)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41039

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Pick Assembly Kit

G-A 8/08/11 (2)

20.0

QC21

FINAL INSPECTION/W/O RELEASE



08/09/12

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-09-11

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

D3562-1, MAKE FROM EXTRUSION D2622

2
APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS

D3560-043 ARM WELDMENT

D3560-041 ARM WELDMENT

TRANSFER DRILL #30 DEBURR & TOUCH UP HOLES WITH CHEMICAL CONVERSION COAT BEFORE RIVETING (32 PLACES PER STEP)

D3560-042 ARM WELDMENT

D3560-044 ARM WELDMENT

D3562-1, MAKE FROM EXTRUSION D2622

2
APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS

4.30 71.707 9.15 (REF)

85.15

MEASURED BEFORE END CAPS WELDED IN PLACE

FWD

REFER TO STEP END DETAIL

INSTALL MS20600AD4W5 RIVET (32 PLACES PER STEP)

9.15 (REF) 71.707 4.30

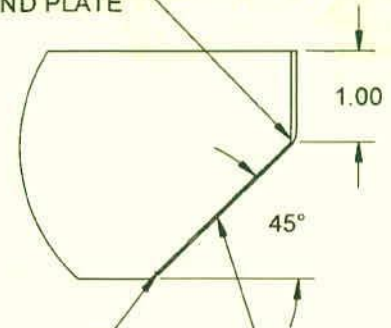
85.15

MEASURED BEFORE END CAPS WELDED IN PLACE

FWD

ROUND CORNER OF EXTRUSION TO MATCH BEND RADIUS OF END PLATE

NOTE: ALL WELDS SHALL BE 100% VISUALLY INSPECTED BY A QUALIFIED INSPECTOR PER DART QSI 004



D2734 END PLATE (TYP 2 PLACES)
TYPICAL STEP END DETAIL
SCALE 1:2

D3562-041 LH STEP ASSEMBLY

D3562-042 RH STEP ASSEMBLY

NOTES:

1) MATERIAL: N/A

2) FINISH:

i) CHEMICAL CONVERSION COAT STEP EXTRUSION PER DART QSI 005 4.1 BEFORE ASSEMBLY

ii) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6) OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 8.79 lbs

8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE POWDER COATING.

9) WELDING: PER DART QSI 004

| QTY -041 | QTY -042 | P/N | DESCRIPTION |
|----------|----------|--------------|------------------|
| X | | D3562-041 | LH STEP ASSEMBLY |
| | X | D3562-042 | RH STEP ASSEMBLY |
| 1 | | D3560-041 | ARM WELDMENT |
| | 1 | D3560-042 | ARM WELDMENT |
| 1 | | D3560-043 | ARM WELDMENT |
| | 1 | D3560-044 | ARM WELDMENT |
| 32 | 32 | MS20600AD4W5 | RIVET |
| 2 | 2 | D2734 | END PLATE |

| | | | |
|------|---|----|----------|
| E | ADD QTY (2) TO D2734 END PLATE ON D3562-042 | PH | 08.01.11 |
| D | REMOVE D2808 SPACER NOTE; REDRAWN IN SOLIDWORKS | DC | 07.11.16 |
| C | NOW MAGNOBOND, ADD D2808, REMOVE 4 RIVETS | CP | 07.06.19 |
| B | ARMS NOW RIVETED TO STEP | CP | 07.01.15 |
| A | NEW ISSUE | CP | 06.09.26 |
| REV. | DESCRIPTION | BY | DATE |

| | | | |
|---|----------|--|--------------|
| DESIGN | gp | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| DRAWN | EH | | |
| CHECKED | LE | | |
| MFG. APPR. | MA | | |
| APPROVED | MA | | |
| DE APPR. | MA | DRAWING NO. D3562 | REV. E |
| DATE | 08.01.11 | TITLE STEP ASSEMBLY | SHEET 1 OF 1 |
| | | SCALE 1:5 | |
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